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Arthur Andersen Economic Consulting. Mr. Shew describes how the Commission used its data base of prices charged by competitive cable systems to derive its benchmarks for large cable systems, those systems with more than 1,000 subscribers. Then Mr. Shew describes his conclusions regarding the FCC's reliance on municipally-owned systems and systems engaged in short-term head-to-head competition in creating the benchmarks.

It is common knowledge to all who have any experience with cable systems involved in overbuilds that these systems typically engage in short-term competition with rates reduced well below longrun average costs. These short-term prices cannot sustain a company over the longrun. Eventually either competition ceases (one company buys out the other, or one goes out of business), or prices rise to a longrun equilibrium price.

Mr. Shew finds evidence of this empirical information in the Commission's data base. For example, one of the overbuild systems involved in short-term competition charges only $1.85 for a service tier of programming consisting of 26 satellite channels. Program fees alone for these services are expected to run $2.70 per subscriber, well in excess of the tier's price. "[T]his case provides a clear example of a price that is unsustainable over the long run." Shew Declaration at 13.

Mr. Shew has found that where cable systems have been engaged in head-to-head competition for five years or less

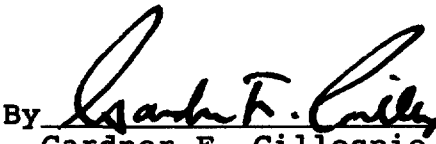
systems with more than 1,000 subscribers are below the prices of 60 percent of the competitive systems in the FCC's data base. These systems exceed the benchmark prices by an average of 26 percent. Id. at 18. Of course, under the Commission's benchmark system, the competitive systems with prices above the benchmarks do not have to reduce their prices, although non-competitive systems do.

Despite the deficiencies of the benchmarks, Harron believes that benchmark prices developed without reference to systems engaged in short-term competition or to municipal

below-cost price wars and municipal systems. When those systems are removed from the calculations, the benchmarks become a fair predictor of average competitive prices. Systems with higher than average costs may still use cost-of-service analyses to justify higher prices.

Respectfully submitted,

HARRON COMMUNICATIONS CORP.

By 
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June 21, 1993

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DECLARATION

I, William Shew, hereby declare under penalty of perjury that the following statements are true and correct:

I am Director of Economic Studies, Arthur Andersen Economic Consulting. I have engaged in numerous studies of the economics of cable systems and television markets in the United States and Europe. My curriculum vitae is attached.

I have been asked to examine the foundation of the benchmarks proposed by the FCC to regulate the prices of basic cable services, particularly as those benchmarks apply to large cable systems, defined as having more than 1000 subscribers. The benchmarks are intended to describe the prices that "competitive" cable television systems would charge for basic cable service packages. The FCC recognized that the prices charged by a cable system -- whether it is "competitive" or not -- depend on characteristics of the service it provides. The FCC's schedule of competitive benchmarks is a function of (1) the number of system subscribers, (2) the number of channels available on all regulated tiers, and (3) the number of satellite-delivered channels on all regulated tiers. The FCC plans to prohibit any "non-competitive" cable system from charging service prices higher than the benchmark prices that, according to its analysis, a "competitive" cable system would charge in the same circumstances.

My conclusions concerning the statistical validity and the soundness of the benchmarks can be summarized as follows:

1. There are inaccuracies in the FCC data used to develop the benchmarks. Determining how these inaccuracies have affected the benchmarks would be quite difficult.

2. The benchmarks derived by the FCC are characterized by a significant degree of statistical uncertainty.

3. A number of the systems used to develop "competitive" benchmarks are municipal systems or private systems engaged in price wars, whose prices would tend to understate the prices that are sustainable in long-run competition.

4. The FCC benchmark equation does not adequately predict the prices charged by large, competitive cable systems.

I will begin by summarizing how the FCC constructed its benchmarks, which is necessary to understand their infirmities. I will then explain my reservations about the benchmarks.

Benchmark Construction

To develop its competitive benchmarks, the FCC began by sending a questionnaire to systems serving 748 cable franchises, out of a total of approximately 30,000 cable franchises operating in the U.S.. Of the 748 surveyed franchises, 300 were randomly selected. The remainder consisted of at least one franchise belonging to each of the largest 100 cable systems and franchises where the FCC believed that "effective" competition was taking place. Cable systems were asked to report, for basic cable service packages they provided, how many channels and satellite-transmitted channels were supplied and the price that was charged, as of September 30, 1992. They were also

asked to report the number of subscribers to each service, and various other information.

Much of the information requested by the FCC is specific to individual franchise areas served by the selected cable systems. Quite commonly, a single cable television system serves adjacent communities or areas that, from the perspective of local franchising authorities, consist of separate franchises. The operator customarily provides the same set of service options throughout the service area, charging a price for each that does not vary from one franchise to another. But since "competition", as defined by the FCC, can be present in one of a cable system's franchise areas and not others, the basic unit of observation in the database developed by the FCC is cable service in the franchise area.

For each of the cable systems, the FCC requested information on a "primary" franchise and, if the system's service territory consisted of more than one franchise, a second franchise. A system's "primary" franchise was defined by the FCC as the franchise drawn in the sample. The "secondary" franchise was to be chosen by the system to favor examples of effective competition, different channel line-up or prices, and large subscriber size. Of the 687 systems returning valid questionnaires, 267 reported on only a primary franchise and 420 reported on a primary and secondary franchise.

After compiling the data reported by the surveyed cable systems, the FCC then selected a subset of the responses, which it used to develop the competitive benchmarks. Although the details of this winnowing process remain imprecise, the following steps were apparently employed. First, the FCC eliminated cable franchises for which the reported data contained important

omissions. From the remaining franchises, it then retained all randomly selected primary franchises and all franchises satisfying the "effective competition" criteria.

The FCC designated three tests to determine whether a franchise area is characterized by effective competition. An area qualified as "competitive" if it satisfied any of those conditions, which the FCC refers to as categories A, B, and C.

Category A: Service penetration in the franchise area is no greater than 30%

Category B: Competing systems serve the franchise area[1]

Category C: A municipally-owned system serves the franchise area[2]

For brevity, I will refer to these criteria of competition as, respectively, 30% penetration, overbuilds, and municipal systems. The prices charged in these "competitive" franchise areas provide the key raw data from which the FCC developed its benchmark prices.

The benchmarks themselves are expressed in terms of the average price per channel a cable system would be allowed to charge for basic cable services. Many cable systems offer two or more basic service packages, often referred to as tiers. In such instances, the basic service prices charged by a cable operator would be tested by comparing its subscriber-weighted average price per channel

[1] To qualify as competitive by this test, a rival system must cover at least 50% of the franchise and obtain a penetration rate above 15%.

[2] More precisely, the "franchise authority" must offer a video programming service that is available in over 50% of the franchise area.

to the estimated price -- the benchmark -- that a comparable "competitive" system would charge. In the example below, the weighted average price per channel is 82.9¢, according to the FCC formula, which involves dividing the subscriber-weighted average price by the subscriber-weighted number of channels. The subscriber-weighted price is $11.60 (10 x 500/500 + 8 x 100/500 = 11.6) and the subscriber-weighted number of channels is 14 (10 x 500/500 + 20 x 100/500 = 14), which gives 82.9¢ ($11.60/14 = 82.9¢).

Tier	Price	Subscribers	Channels
Basic	$10	500	10
Expanded Basic	$8	100	20

Using the sub-sample of the cable system franchises it selected, the FCC developed its benchmarks by estimating an equation relating the average price per channel charged by a cable system in a franchise area, calculated in this fashion, to four factors: (1) system subscribers, (2) number of channels available in all regulated tiers, (3) number of satellite-delivered channels in all regulated tiers, and (4) whether effective competition exists in the franchise.

The form of the equation estimated by the FCC assumes that the prices charged in a "competitive franchise" are lower by a uniform proportion than the prices charged in a non-competitive franchise by a system offering the same services and having the same number of system-wide subscribers. So, for the purpose of developing benchmarks, the key parameter is this uniform competitive discount. The estimate of the competitive discount obviously depends critically on the service prices charged in the "competitive" franchises in the sample.

The equation estimated by the FCC was translated into a series of tables displaying the benchmark price -- the average price per channel that a "competitive" system would be predicted to charge -- as a function of attributes of cable systems. Examples of FCC benchmarks for systems having 1,500 subscribers and 10,000 subscribers are displayed in the following table.

Benchmark Price/Channel, 1,500 Subscribers

	Total Basic Channels		
Satellite Channels	20	50	100
10	$0.930	$0.412	$0.223
25	--	$0.452	$0.244
50	--	--	$0.262

Benchmark Price/Channel, 10,000 Subscribers

	Total Basic Channels		
Satellite Channels	20	50	100
10	$0.927	$0.411	$0.222
25	--	$0.450	$0.243
50	--	--	$0.261

Benchmark Evaluation

For benchmark prices to be reasonable, they must allow the cable systems regulated by them an opportunity to recover the cost of providing cable service, including the cost of capital. If benchmarks prevent a number of cable systems from recovering their costs, the long-term consequence will be a withdrawal of service from those areas, something not in the interest of consumers.

To evaluate whether benchmarks are likely to provide systems with the opportunity to recover their costs, it is helpful to address the following questions.

1. Are the data used to construct the benchmarks accurate?

2. Are the service prices charged by the "competitive" systems in the sample adequate for those cable systems to recover their costs?

3. Is the valid sample of competitive systems sufficiently large to produce a statistically reliable measure of "competitive" prices?

4. Do the benchmarks take into account all factors affecting service costs necessary to prevent the benchmark prices from falling below significantly service costs for some cable systems?

It is true that, in the new regulatory environment, a cable system feeling that the benchmark applicable to it is unreasonably low would be afforded the opportunity of justifying its prices by reference to its cost of service. Thus, it might appear that the reasonableness of the benchmark prices should not be of great concern. But that overlooks the consideration that many cable systems frequently do not have the detailed cost records, extending back in time, that firms accustomed to cost-based rate regulation are in the practice of keeping.

To provide a cost justification of basic service rates, it would be necessary to separate those costs a system incurs in the provision of basic services from the costs it incurs to provide those services not subject to regulation. Moreover, since some of the costs of the current service provided by a cable system were incurred some time in the past, good historical data are necessary to portray accurately the cost of services now being provided by cable systems.

Cable systems often find it impossible or extremely difficult to provide such data. Cost accounts are often kept in terms of functional cost categories, such as service calls, or plant maintenance. Records frequently do not provide enough information to distinguish, within a category, between basic and pay service costs. As for records of assets used to provide current cable service that were acquired in the past, finding cost records containing sufficient detail to reasonably apportion those costs between basic and pay services is even more challenging. When they simply no longer exist, or can only be reclaimed through a time-consuming search, the recourse to a cost-of-service justification may be of little value.

Even those large systems that have maintained and preserved the necessary cost records would have to prepare whatever analyses are required to implement the methodology that is adopted to estimate the cost of regulated services. The burden that would be imposed on such systems of developing a cost-of-service justification makes it quite important that a system of benchmark regulation establish reasonable price caps.

I will now turn to a discussion of what I see as some of the deficiencies of the FCC benchmarks.

1. Inaccurate Data

The portrayal of service prices, subscriber numbers and channel carriage contained in the FCC's database is not always accurate. That is clear from spot checks performed under my direction and also from a comparison of the FCC database with a "corrected" version of the database prepared by the National Cable Television Association. It would be very laborious to develop a comprehensive evaluation of the error rates in the FCC database, the average size of the errors, and the effect of those errors on the benchmarks calculated by the FCC. Although such an evaluation would be quite useful, I am not aware that anyone has undertaken it. In its absence, all that can be said is that errors in the FCC data may have led to inappropriate benchmarks.

2. Small Sample Size

Of the 377 franchises used to develop the benchmarks, the overwhelming share are "non-competitive", according the FCC's classification scheme. They would have had only a minor effect on the statistical derivation of "competitive" benchmarks -- as indeed should be the case, given the objective of obtaining a benchmark that describes the cable service prices that emerge in competitive markets.

The equation used by the FCC to generate the benchmarks is estimated from a sample containing 65 large "competitive" cable systems. There are various ways of quantifying the imprecision introduced by sample size in the development of competitive benchmarks. One useful measure relates to the

variable in the FCC's equation characterizing whether or not a service is "competitive".

Table 1: Large Systems in the FCC Sample

System Subscribers	Not Competitive	Competitive			Category Total
		30% Penetration	Private Overbuilds	Municipal Markets	
1,000 to 1,500	19	1	0	2	22
1,500 to 10,000	79	10	11	3	103
10,000 and above	92	21	13	4	130
TOTAL	190	32	24	9	255

According to the FCC's analysis, service prices are 9% lower in "competitive" franchises, other factors equal. If two systems have identical numbers of subscribers and channels, but one operates in a "competitive" franchise and the other does not, the FCC would predict that service prices in the competitive franchise would be 9% lower. But in actuality, that estimate is subject to uncertainty, which can be quantified. The probability is 95% that

The figure of 65 almost certainly overstates the number of cable systems in the database capable of providing a reliable guide to "competitive" prices. Nine of the large cable systems qualify as competitive because they are municipally owned or compete with a municipal cable system. But in those markets, prices may well be below the cost of a private sector operator, because municipal cable services have unique cost advantages. In addition, 15 of the 24 private overbuilds involving large systems have existed five years or less. Such short-term competition is typically characterized by price wars, during which prices are often held well below average total cost. If the short-term overbuilds (lasting five years or less) and markets involving municipal systems are removed, the FCC sample contains only 41 large "competitive" cable franchises.

Large Systems with Competitive Franchises

Competition Criteria	FCC Data	Excluding Questionable Franchises
30% Penetration	32	32
Private Overbuilds	24	9

access to inexpensive finance (tax exempt bonds), use of public rights-of-way at no charge, and exemption from franchise fees and property taxes. These considerations would lead to the expectation that prices charged by municipal systems tend to be lower than the prices charged by competing private cable systems.

That does indeed seem to be true of the cable systems in the FCC database. The "competition" variable in the FCC's benchmark equation indicates whether the system qualifies as being classified as competitive by any of the three FCC tests (30% penetration, private overbuild, municipal system). We replaced that single variable in our analysis by separate variables indicating respectively whether or not the system (a) had a penetration rate of 30% or less, (b) was involved in a private overbuild, or (c) was a municipal system. With that reformulation, we re-estimated the FCC equation. The results revealed that basic service prices charged by municipal systems are almost 15% below prices charged by competing private systems, other factors equal.

It is also questionable whether some of the prices charged by competing private systems provide a suitable basis for developing benchmark prices. Cable overbuilds almost invariably precipitate price wars far more drastic than the price competition that occurs in most markets. The reason is not hard to find. The fixed costs of providing cable service, which include the distribution system, are quite high. Once those costs are incurred, the variable cost of serving a subscriber is relatively low. When cable systems compete head-to-head, each has an incentive to drop its price as low as the variable cost of service, a low figure, if the alternative is to lose subscribers to the rival cable system.

As a case in point, one of the overbuild cable systems in the FCC database is charging $1.85 for its second tier, which contains 26 satellite-transmitted channels of programming. We determined the channel line-up (the

duration of competition was five years or less, prices were 25% lower than in those franchises where competition had endured more than five years. The statistical reliability of this difference is extremely high, which means there is little doubt that the prices associated with short-term competition are substantially lower than the prices that have emerged from more durable competition.[3]

Removing markets served by municipal systems and short-term overbuilds from the FCC's sample and re-estimating the benchmark equation causes the benchmark prices to increase. The benchmark prices that result, which are reported in the appendix, exceed the FCC's benchmarks by an amount that varies with system size and the channels provided in the basic service packages. Depending on those attributes, the benchmarks increase from approximately 10% to 22%.

In order to determine how much the average benchmark price would be raised for systems subject to regulation, we can compare the average price per channel determined by the FCC benchmarks with the corresponding benchmarks when franchises served by municipalities and short-term competitors are excluded. The "non-competitive" systems in the sample used by

[3] There is no hard and fast rule governing how long price wars may persist. In some settings, such as gas station competition, spasmodic price wars may recur over very protracted periods of time. But the price wars conducted by competing cable systems appear to be characterized by holding prices very low over sustained periods of times rather than intermittent price cuts. Intuitively, it seems quite unlikely that cable price wars, in which prices are held below average total cost, would persist for over a decade. We tested whether price behavior in franchise areas containing overbuilds seemed to differ systematically with the number of years the overbuild situation had persisted. This was done by adding a binary variable taking on a value of one if competition in the franchise was (so far) "short-term". We tested various definition of "short-term" competition, ranging from competition that has lasted one year or less to competition that has persisted ten years or less. The boundary point having the greatest explanatory power (R-squared) was five years. (See Appendix 2.)

the FCC to estimate its benchmarks prices should provide a reasonably accurate profile of the systems that will be subject to regulation. Treating those systems as representative, the average increase in benchmark prices as a result of excluding franchises served by municipal systems and short-term overbuilds can be determined. The results are shown the following table. The higher benchmarks resulting from excluding

Large System Benchmarks, Eliminating Questionable Franchise Areas

Excluding franchises where	Increase in Average Benchmark Price
1) competition is recent (5 years or less)	5.8%
2) municipal service is provided	5.0%
3) both (1) and (2)	14.4%

franchises with short-term competition and municipal systems would require one third of all "non-competitive" systems to lower their rates, if the FCC's sample is representative.

4. Benchmark Prediction Errors

If a benchmark equation is to impose reasonable caps on the prices charged by regulated systems, the equation must be able to portray accurately the prices charged by the competitive systems intended to serve as the benchmarks. The reason, on reflection, is clear. Suppose that cable systems A and B are identical in every respect, except that B directly competes with another cable system. The general theory of benchmark regulation would then

say that the price charged by B provides the appropriate benchmark for regulating A's price. That is true because the two systems provide identical services and operate in identical environments, so the price charged by B should reveal the price that A would charge if it, also, were operating in a competitive market.

But, pursuing this example, the benchmark that the FCC plans to apply to system A is not the price charged by B, but rather the price that the FCC's equation predicts that B charges. That makes it important for the benchmark equation to be able to predict accurately the prices charged by the "competitive" systems. To revert again to the previous example, suppose more concretely that system B charges $20 per month for basic service, but the FCC's equation predicts that it charges $16 per month. Then system A would be limited to a $16 price, even though the correct benchmark is $20. This problem would not arise, obviously, if the equation correctly predicted the prices charged by competitive systems. Whether the FCC equation does accurately predict "competitive" prices is therefore quite important.

In order to accurately predict competitive service prices, it is necessary to take into account all of the factors significantly influencing price formation in competitive markets. For example, cable distribution plant installed underground is considerably more expensive that aerial distribution, and the proportion of plant underground varies widely from one system to another. If that factor has an important influence on prices charged in competitive markets, but is ignored by the equation used to predict competitive service prices, it is quite unlikely that the predictions made by the equation would be very accurate. The FCC equation predicts service prices in competitive markets by taking into account

only three factors: the number of subscribers, the number of channels, and the number of satellite-delivered channels.

Whether those three variables are adequate to accurately predict competitive prices is ultimately an empirical matter. The ideal test would be to draw a new, random sample of "competitive" cable systems and determine how accurately their prices are predicted by the FCC equation. An easier test is to examine how well the equation predicts the prices of "competitive" systems in its database. Since the equation estimated by the FCC is based importantly on those particular systems, I would expect it to predict those prices more accurately than prices charged by a new sample of competitive cable systems, or competitive systems in general. In other words, if the equation does not predict accurately the prices of competitive systems in the sample from which it was estimated, it is even less likely to do so when applied to competitive systems in general.

A comparison of the prices charged by large competitive cable systems in the FCC sample with the prices predicted for those systems by the FCC equation reveals some large errors. The FCC's benchmark equation is incapable of accounting for almost one-half of the price variations among large cable systems. Of the 65 large competitive cable systems in the FCC sample, the FCC's benchmark equation understates the prices charged by 60% of them and overstates the prices of the remainder. Both types of errors, of course, are undesirable. But errors in the direction of understating the prices actually charged by the benchmark systems are more serious, since they raise the possibility that comparable systems subject to regulation will be incapable of

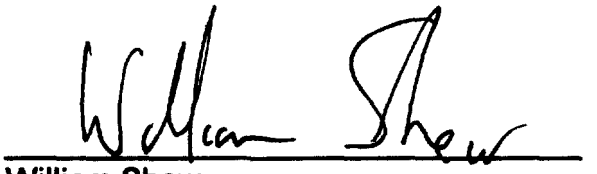
recovering their costs, and thus threatened with the prospect of going out of business.

The outcome that 60% of the large competitive systems used by the FCC are themselves above the FCC benchmarks can be viewed from a different perspective. Although "noncompetitive" systems charging the same rates would have to reduce their prices, the "competitive" systems do not.

Of the 40 large competitive systems with higher than predicted rates, their prices exceeded by 26% the prices predicted by the FCC equation, on average. To examine these underestimates in more detail, I arranged the 40 cable systems in the order of how much their prices exceeded the predicted prices, and then divided the ordered list into groups of ten. I then calculated, for each group of ten, the average amount by which the actual price exceeded the price predicted by the FCC. The results are displayed on the following table.

Actual Competitive Prices Relative to Benchmark Prices

the conclusion that, in such instances, the FCC benchmarks would deprive large cable systems of the opportunity to recover the cost of providing service.



William Shew

Executed on June 18, 1993

Appendix A

Benchmark Cable Rates When Municipal and Short-term Competitive Franchises Are Excluded

Systems with 1,500 subscribers, 5 to 24 channels: Prices per Channel

Satellite Channels	Total channels on regulated tiers																				Satellite Channels
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
0	$2.527	$2.159	$1.890	$1.684	$1.521	$1.389	$1.279	$1.187	$1.108	$1.039	$0.979	$0.926	$0.879	$0.836	$0.798	$0.764	$0.732	$0.703	$0.677	$0.652	0
1	$2.527	$2.159	$1.890	$1.684	$1.521	$1.389	$1.279	$1.187	$1.108	$1.039	$0.979	$0.926	$0.879	$0.836	$0.798	$0.764	$0.732	$0.703	$0.677	$0.652	1
2	$2.769	$2.365	$2.071	$1.845	$1.667	$1.522	$1.402	$1.300	$1.214	$1.138	$1.072	$1.014	$0.963	$0.916	$0.875	$0.837	$0.802	$0.771	$0.742	$0.715	2
3	$2.920	$2.495	$2.184	$1.947	$1.758	$1.605	$1.479	$1.372	$1.280	$1.201	$1.131	$1.070	$1.016	$0.967	$0.923	$0.883	$0.846	$0.813	$0.782	$0.754	3
4	$3.033	$2.592	$2.269	$2.022	$1.826	$1.668	$1.536	$1.425	$1.330	$1.247	$1.175	$1.111	$1.055	$1.004	$0.958	$0.917	$0.879	$0.844	$0.813	$0.783	4
5	$3.124	$2.669	$2.336	$2.082	$1.881	$1.717	$1.582	$1.467	$1.369	$1.284	$1.210	$1.145	$1.086	$1.034	$0.987	$0.944	$0.905	$0.869	$0.837	$0.807	5
6		$2.734	$2.393	$2.133	$1.927	$1.759	$1.620	$1.503	$1.403	$1.316	$1.240	$1.172	$1.113	$1.059	$1.011	$0.967	$0.927	$0.891	$0.857	$0.826	6
7			$2.442	$2.176	$1.966	$1.795	$1.653	$1.534	$1.431	$1.343	$1.265	$1.196	$1.135	$1.081	$1.032	$0.987	$0.946	$0.909	$0.875	$0.843	7
8				$2.215	$2.001	$1.827	$1.683	$1.561	$1.457	$1.367	$1.288	$1.218	$1.156	$1.100	$1.050	$1.004	$0.963	$0.925	$0.890	$0.858	8
9					$2.032	$1.856	$1.709	$1.585	$1.480	$1.388	$1.308	$1.237	$1.174	$1.117	$1.066	$1.020	$0.978	$0.940	$0.904	$0.872	9
10						$1.882	$1.733	$1.608	$1.500	$1.407	$1.326	$1.254	$1.190	$1.133	$1.081	$1.034	$0.992	$0.953	$0.917	$0.884	10
11							$1.755	$1.628	$1.519	$1.425	$1.343	$1.270	$1.205	$1.147	$1.095	$1.047	$1.004	$0.965	$0.928	$0.895	11
12								$1.647	$1.537	$1.442	$1.358	$1.285	$1.219	$1.160	$1.107	$1.060	$1.016	$0.976	$0.939	$0.905	12
13									$1.553	$1.457	$1.373	$1.298	$1.232	$1.173	$1.119	$1.071	$1.027	$0.986	$0.949	$0.915	13
14										$1.471	$1.386	$1.311	$1.244	$1.184	$1.130	$1.081	$1.037	$0.996	$0.958	$0.924	14
15											$1.399	$1.323	$1.255	$1.195	$1.141	$1.091	$1.046	$1.005	$0.967	$0.932	15
16												$1.334	$1.266	$1.205	$1.150	$1.100	$1.055	$1.014	$0.975	$0.940	16
17													$1.276	$1.215	$1.160	$1.109	$1.064	$1.022	$0.983	$0.948	17
18														$1.224	$1.168	$1.118	$1.072	$1.029	$0.991	$0.955	18
19															$1.177	$1.126	$1.079	$1.037	$0.998	$0.962	19
20																$1.133	$1.087	$1.044	$1.005	$0.968	20
21																	$1.094	$1.051	$1.011	$0.975	21
22																		$1.057	$1.017	$0.981	22
23																			$1.023	$0.986	23
24																				$0.992	24
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
	Total channels on regulated tiers																				

Note: Benchmarks derived by re-estimating the FCC benchmark equation from the FCC sample, excluding franchises served by a municipally-owned cable system and franchises characterised by competition that has persisted 5 years or less.